surface;

a color imaging device including photo-detectors and color filters arranged on the image surface in two-dimensions, for performing photoelectric conversion of the image of the object formed by the imaging optical system;

shift drive means for shifting the imaging optical system and the photo-detectors relative to each other; and

a control unit for generating a synthesized image using image data of the image of the object obtained through color filters for a selected color of the color imaging device, and image data of an image of the object obtained through the color filters when the imaging optical system and the photo-detectors are shifted relative to each other by the shift drive means by a distance corresponding to a pixel on the imaging surface;

wherein the control unit controls the shift drive means for shifting the image optical system the photo-detectors relative to each other by a distance corresponding to a predetermined pitch in a plurality of different directions to obtain a plurality of images, and generates a single monochromatic image using image data of obtained plurality of images and image data of the synthesized image.

16. (Newly Added) An image processing apparatus according to Claim 15, wherein the color filters for three colors are arranged according to a Bayer scheme.

17. (Newly Added) An image processing apparatus according to Claim 15, wherein the predetermined pitch is a distance corresponding to 1/n (n is

an integer) of a pixel on the imaging surface.

18. (Newly Added) An image processing apparatus according to Claim 17, wherein the control unit repeats shifting by the distance corresponding to 1/n (n is an integer) of the pixel on the imaging surface a plurality of number of times.

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19. (Newly Added) An image processing apparatus according to Claim 18, wherein the control unit obtains N images, when the predetermined number of times is N.

20. (Newly Added) An image processing apparatus according to Claim 15, wherein the selected color of three colors is green.

21. (Newly Added) An image processing method comprising:

forming an image of an object on an imaging surface of a color imaging device by an imaging optical system;

extracting first image data of a selected color from the image of the object formed on the image surface;

shifting the imaging optical system and the color imaging device relative to each other by a distance corresponding to a pixel on the imaging surface;

extracting second image data of the selected color from an image of the object obtained after shifting is performed;

generating synthesized image data using the first and second image data;

shifting the imaging optical system and the color imaging device relative to each other by a distance corresponding to 1/n (n is an integer) of a pixel on the imaging surface in different directions a plurality of numbers of times to obtain a plurality of image data of the selected color; and

generating a monochromatic image by synthesizing the synthesized image data and the plurality of image data of the selected color.

22. (Newly Added) An image processing method according to Claim 21, wherein the selected color of three colors is green.

23. (Newly Added) An image processing method according to Claim 21, wherein the color imaging device includes photo-detectors arranged on the imaging surface each forming a pixel, and color filters for three colors arranged at positions respectively corresponding to the photo-detectors, and the image of the object is formed on the photo-detectors through the color filters by the imaging optical system.